M/037/0088
CC: Tom

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

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Div. of Oil, Gas & Mining

File: UTU-72499
Office: (UT-090)

Date: 08/13/10
To: Minerals File UTU-72499
From: Ted McDougall, Geologist
Subject: Surface Management Site Inspection, Lisbon Valley Mining Company, Lisbon Mine, UTU-72499 (M/037/0088), San Juan County, Utah.

Date of Inspection: 08/12/2010
Time of Inspection: 9:00 A.M.
Participants: Ted McDougall, Lantz Indergard
Legal Description: T. 30 S., R. 25 E., Section 26
Claimant/Operator: Lisbon Valley Mining Company
Bond Amount: $6,076,888
Date of Last Bond Review: 8/20/09

I was asked to conduct a site inspection of the Lisbon Valley Mine Operation in order to assist the Moab Field Office in completing some of its backlog surface management workload. Two mine plan modifications have been approved/accepted by BLM within the past year. A review of the case file indicates that the two modifications (Sentinel East Pit backfill and haul road from GTO Pit to the Heap facility) have not been inspected by the BLM. I decided to look at these two modifications first and then other areas of the site as time allowed.

Approved Plan Modification - Sentinel East Pit Backfill

On September 18, 2009, the Moab Field Office approved a Plan Modification authorizing the backfilling of the Sentinel East Pit and the expansion of dump C with 9,000 kilotons of waste rock from the Centennial Pit. The modification includes designed drainage control around the toe of Dump C and selective handling of the waste rock to encapsulate waste rock having acid generating potential with waste rock having acid neutralizing potential.

The Sentinel East Pit has been backfilled and the westward expansion of Dump C is progressing. I asked Lantz how they ensured that the waste rock with acid generating potential is properly encapsulated in the backfill. Lantz said that past characterization study of the local rock units has identified the beds with acid generating potential (beds 6-10) and the beds with acid neutralizing potential (beds 1-5 and 11-15). In addition to knowing the acid generating potential of individual

beds, samples are collected and tested at the mine, and results are reported to permitting agencies each quarter.

The UDOGM is requiring that check dams be constructed in the drainage around the toe of dump C. According to Lantz, this work has not been completed.

Accepted Plan Modification - Haul Road from GTO Pit

A review of the case file indicates that in September 2009, the Moab Field Office accepted a Plan Modification from Lisbon Valley Mining (LVM) to construct a haul road from the GTO Pit to the leach pad. The road would be approximately 4,500 feet in length. Construction would widen (20 feet) an existing pipeline disturbance for much of the roads length and would require approximately 200,000 cubic yards of crushed/broken rock fill. The road would cross both BLM and State land.

Construction work on the haul road has not started. Lantz said that he needs to submit additional design specifications to the UDOGM before they will give final approval. Lantz and I followed the approximate alignment of the proposed haul road to the GTO Pit using existing roads.

Possible Future Modifications

LVM is contemplating several additional modifications to its Plan of Operations as follows:

- Possible expansion of Waste Dump C toward the southeast.
- Realignment of County Road to accommodated the southeasterly progression of the Centennial Pit.
- Concurrent reclamation of approximately 8 acres of disturbance at the site of the former secondary crusher and other areas in order to offset or trade bond amount for Dump C expansion.

Lantz said that the UDOGM has recommended that changes to the Plan be consolidated into one modification where practical. I agreed that it would probably be more efficient to review and process a single modification with several changes rather than many separate modifications to the Plan.

Required Modification - Crusher Facility

Lantz explained that Lisbon Valley Mining has made a change to its ore beneficiation process. The run of mine ore is no longer being crushed and sized before going to the leach pad. Ore sizing is done entirely with controlled blasting techniques. Run of mine ore is transported directly to the leach pad. As a result, the primary and secondary crusher facility has been dismantled and removed from the site. The large steel-reinforced concrete substructure remains on site. Lantz said they have discussed, with the UDOGM, the possibility of reclaiming the substructure in place by covering it with waste rock and topsoil and extended the slope. This change probably requires a modification to the Plan of Operation and a bond adjustment.

Required Modification – Dump C

Topsoil has not been spread on a portion of Dump C. Lantz said that Paul Baker, UDOGM indicated that topsoiling may not be necessary because the waste rock may provide an adequate growth medium. This change in the reclamation plan would require a Plan Modification.

Waste Rock Dump C

Concurrent reclamation work has been done on much of Dump C. There is moderate re-vegetation success in limited areas but the overall success is inadequate. Small rills have developed in the south slope. Rilling is probably due, in part, to past practice of spreading the topsoil and seeding with equipment moving perpendicular to the slope rather than parallel to the slope contour. Fourwing saltbush, Indian ricegrass and some wheatgrass occurs on the slope. These occur in greater abundance at the toe of the slope or on breaks in the slope (benches). Russian thistle is the predominant vegetation type on site. This is even true on top of Dump C where, presumably, vegetation response would be much greater.

Lantz said that remedial drill seeding is planned this fall. The slope at the southeast end of Dump C has not been seeded because LVM is preparing a Plan Modification to extend the dump to the southeast. The proposed dump expansion would result in the un-seeded slope being covered with additional waste rock from the Centennial Pit.

Sentinel West Pit

Operations are complete at the Sentinel West Pit. In its ROD, the BLM decided not to backfill the Sentinel West Pit because the pit bottom is below the water table and alkaline leachates could develop which may degrade the deeper Entrada/Navajo aquifer. We visited the site to observe the pool of water in the bottom of the pit formed by ground water in the Burro Canyon aquifer.

Heap Leach Facility

Construction of the Phase 3 heap has begun. A 3-ft protective cover consisting of minus ¾ inch ore is being placed over the liner (80 Mil HDPE). Heap construction is monitored and inspected by the State of Utah to ensure compliance with the terms of its Ground Water Quality Discharge Permit.

Storm Water

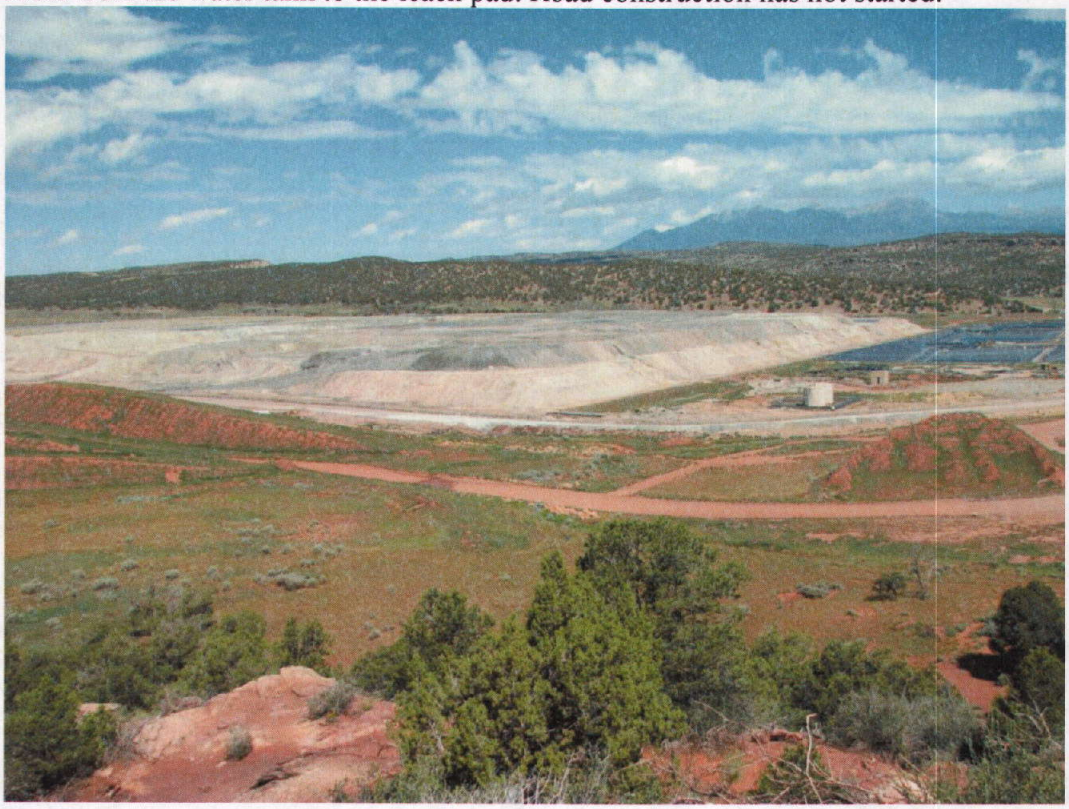
All storm water from the site drains to a large catchment basin located between the Sentinel Pit and the County Road. Lantz said the basin is designed for a 100 yr/6-hr event. The catchment basin has plenty of freeboard after the recent monsoon rains.

Conclusions/Recommendations

- Remedial drill seeding is planned for Dump C this fall. LVM should continue to monitor the site to ensure that rilling does not worsen. Additional remedial work may become necessary to stabilize the site and increase the cover of desirable species. This may require treatment of the Russian thistle at some point.
- LVM should do concurrent reclamation each autumn as areas become available. This includes application of topsoil (growth medium) unless a Plan Modification is approved.
- When practical, LVM should consolidate changes to the Plan of Operations into a single Plan Modification.
- LVM should submit a Plan Modification if it intends to reclaim the primary crusher substructure in place.
- LVM still needs to construct check dams in the drainage re-route around the expanded toe of Dump C.
- LVM should seed the southeast end of Dump C if a Plan Modification to expand the dump is not received and approved before next fall.

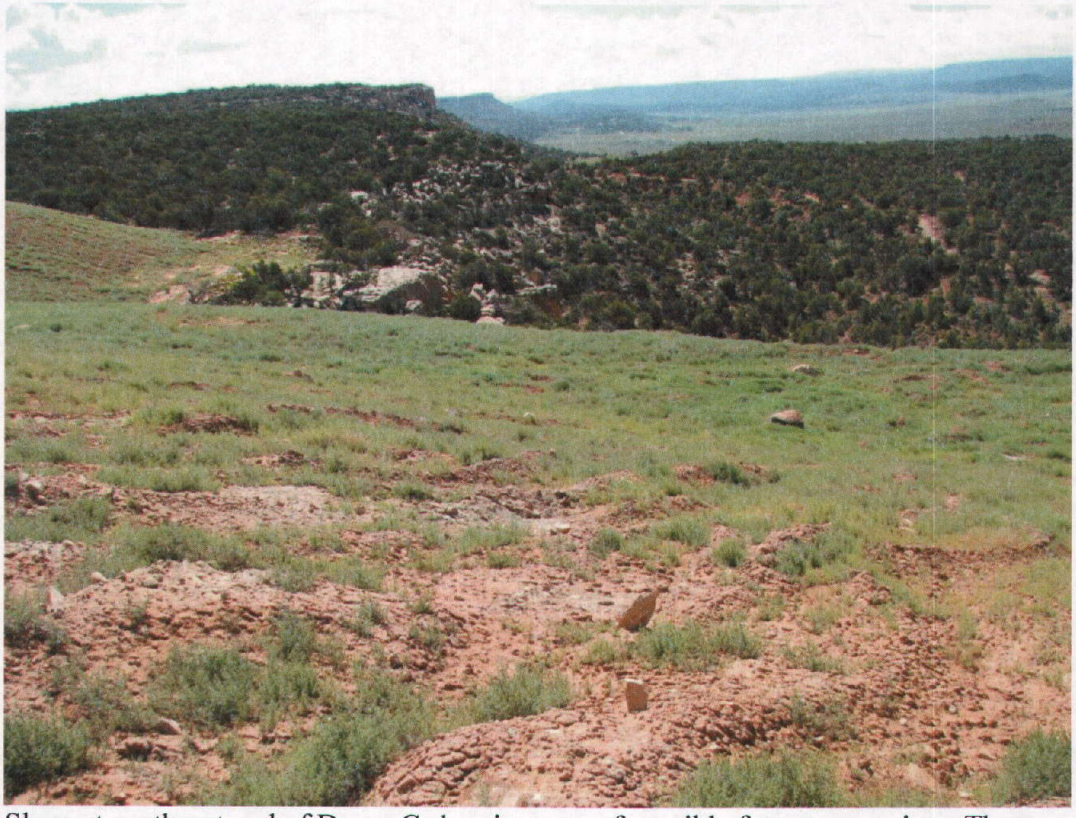
Backfilling of the Sentinel East Pit is complete and expansion of Dump C is progressing to the northwest.

Proposed haul road from GTO Pit to leach pad. Top - Shows approximate route from the GTO Pit to existing water tank. Bottom – Shows approximate route from the water tank to the leach pad. Road construction has not started.



South slope of Dump C. Top – view from toe of slope to the top. Moderate to good cover of Fourwing saltbush with some Indian ricegrass. Note the minor rilling that is occurring and abundance of Russian thistle. Bottom – shows first bench on slope.

Top – Dump C slope that has not been topsoiled or seeded. Bottom – shows top of Dump C that has been topsoiled and seeded. Again note the predominance of Russian Thistle and lack of desirable vegetation species at both locations.



Slope at southeast end of Dump C showing area of possible future expansion. The Slope has been topsoiled but not seeded. Top – view from top looking southeast. Bottom – view from toe of slope looking north-northeast. Again, note rills in slope.

Top – Shows bottom of Sentinel West Pit. Small pool of water has formed from ground water in the Burro Canyon Aquifer. Bottom – Construction of Phase 3 Heap. A 3-ft protective cover consisting of minus ¾ inch ore is being placed over the liner.